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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/397,675	09/16/1999	MASANORI YACHI	991021	9058

23850 7590 07/29/2003

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EXAMINER	
KWOK, HELEN C	
ART UNIT	PAPER NUMBER
2856	

DATE MAILED: 07/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/397,675	Applicant(s) YACHI ET AL.	
	Examiner Helen C. Kwok	Art Unit 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *02 June 2003 and 09 July 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) *3-18* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-2* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 9, 2003 has been entered.

Claim Rejections - 35 U.S.C. § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 4,848,157 (Kobayashi).

With regards to claims 1 and 2, Kobayashi discloses an acceleration detecting device comprising, as illustrated in Figures 1-3 and 12, a base 23 (considering the frame as the base); a transducer 11 that is not permanently oscillating (the Examiner is considering the beam 11 as the

transducer) is supported at the base 23; a weight portion 14 consisting of a weight 15 is connected to the transducer 11 and supported at a position different form the center of gravity of the vibrator (i.e. the weight portion is attached at an end portion of the transducer as observed in the figures); a detecting section 16a-16d is formed on the transducer (as one observed, the detecting section is positioned on the transducer 11) for detecting the amount of characteristic corresponding to a torsion of the transducer caused by an angular moment upon application of an acceleration in one direction to the transducer and the weight portion wherein a face of the transducer is made flush with a face of the weight portion (As observed in the figures, a face of the weight is made flush with a face of the transducer). Furthermore, as one observes in Figures 1-2 (which is a further embodiment in the reference), the base 17, transducer 11 and the weight portion 15 are stacked in the height direction, (It should be noted that this is a cross sectional view of Figure 16). (See, column 2, line 56 to column 3, line 68; column 5, lines 29-50).

Claim Rejections - 35 USC § 103

4. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,848,157 (Kobayashi) in view of either JP 3-82910 (Terajima) or U.S. Patent 6,006,606 (Shinogi et al.). [It should be noted that this art rejection is made for the sake that Applicant does not agree with the above rejection with respect to the elements being stacked in a height direction].

With regards to claims 1 and 2, Kobayashi discloses an acceleration detecting device comprising, as illustrated in Figures 1-3 and 12, a base 23 (considering the frame as the base); a transducer 11 that is not permanently oscillating (the Examiner is considering the beam 11 as the transducer) is supported at the base 23; a weight portion 14 consisting of a weight 15 is connected to the transducer 11 and supported at a position different form the center of gravity of the vibrator (i.e. the weight portion is attached at an end portion of the transducer as observed in the figures); a detecting section 16a-16d is formed on the transducer (as one observed, the detecting section is positioned on the transducer 11) for detecting the amount of characteristic corresponding to a torsion of the transducer caused by an angular moment upon application of an acceleration in one direction to the transducer and the weight portion wherein a face of the transducer is made flush with a face of the weight portion (As observed in the figures, a face of the weight is made flush with a face of the transducer). See, column 2, line 56 to column 3, line 68; column 5, lines 29-50). The only difference between the prior art and the claimed invention is the base, the transducer and the weight portion are stacked in a height direction. Terajima and Shinogi et al. disclose a sensor comprising, as illustrated in Figures 25-27 of Terajima and Figure 4 of Shinogi et al., a base, a transducer and a weight portion stacked in a height direction. (As observed in the figures). It would have been obvious to a person of ordinary skill in the art at the time of invention to have readily recognize the advantages and desirability of stacking the base, the transducer and the weight portion in the height direction as suggested by Terajima and Shinogi et al. to the apparatus of Kobayashi to provide a sensor that will be able to detect

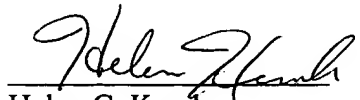
torsional moment at high sensitivity and to reduce noise and attain high performance by directly joining together the base, the transducer and the weight portion. Moreover, this is a mere design expedient as to stack the elements together or position the elements in a planar manner since this is a mere choice at the time of fabrication and depending on the amount of space available without departing from the scope of the invention, namely to detect acceleration.

Response to Amendment

5. Applicant's arguments with respect to claims 1 and 2 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen Kwok whose telephone number is (703) 308-8149.



Helen C. Kwok
Art Unit 2856

hck
July 28, 2003